

SEQUENCE LISTING

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 Chartash, Elliot K
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 Murtaza, Anwar
 Salfeld, Jochen G
 Fischkoff, Steven

<120> TREATMENT OF PAIN USING TNF α INHIBITORS

<130> BPI-193

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<150> 60/397,275

<151> 2002-07-19

<150> 60/411,081

<151> 2002-09-16

<150> 60/417,490

<151> 2002-10-10

<150> 60/455,777

<151> 2003-03-18

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Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Gly	Ile	Arg	Asn	Tyr
		20						25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys	Leu	Leu	Ile
		35				40						45			
Tyr	Ala	Ala	Ser	Thr	Leu	Gln	Ser	Gly	Val	Pro	Ser	Arg	Phe	Ser	Gly
	50				55					60					
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro
65				70						75				80	
Glu	Asp	Val	Ala	Thr	Tyr	Tyr	Cys	Gln	Arg	Tyr	Asn	Arg	Ala	Pro	Tyr
			85					90						95	

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Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

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<400> 2

Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Arg
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Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	Asp	Asp	Tyr
			20					25					30		
Ala	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val
		35					40					45			
Ser	Ala	Ile	Thr	Trp	Asn	Ser	Gly	His	Ile	Asp	Tyr	Ala	Asp	Ser	Val
	50				55					60					
Glu	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn	Ser	Leu	Tyr
65					70				75					80	
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys
			85					90					95		
Ala	Lys	Val	Ser	Tyr	Leu	Ser	Thr	Ala	Ser	Ser	Leu	Asp	Tyr	Trp	Gly
			100					105					110		
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser							
		115					120								

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<223> Xaa = Thr or Ala

<223> Mutated human antibody

<400> 3
Gln Arg Tyr Asn Arg Ala Pro Tyr Xaa
1 5

<210> 4
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<223> Xaa = Tyr or Asn

<223> Mutated human antibody

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<400> 4

Val Ser Tyr Leu Ser Thr Ala Ser Ser Leu Asp Xaa
1 5 10

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Ala Ala Ser Thr Leu Gln Ser
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Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val Glu
1 5 10 15
Gly

<210> 7

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Arg Ala Ser Gln Gly Ile Arg Asn Tyr Leu Ala
1 5 10

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Asp Tyr Ala Met His
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Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly
 1           5           10           15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Arg Asn Tyr
          20           25           30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
          35           40           45
Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
          50           55           60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65           70           75           80
Glu Asp Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Tyr
          85           90           95
Ala Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
          100           105

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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1           5           10           15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr
          20           25           30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val
          35           40           45
Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val
          50           55           60
Glu Gly Arg Phe Ala Val Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr
65           70           75           80
Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys
          85           90           95
Thr Lys Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn Trp Gly
          100           105           110
Gln Gly Thr Leu Val Thr Val Ser Ser
          115           120

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Gln Lys Tyr Asn Ser Ala Pro Tyr Ala
 1           5

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<400> 12
Gln Lys Tyr Asn Arg Ala Pro Tyr Ala
1 5

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<400> 13
Gln Lys Tyr Gln Arg Ala Pro Tyr Thr
1 5

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<400> 14
Gln Lys Tyr Ser Ser Ala Pro Tyr Thr
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Gln Lys Tyr Asn Ser Ala Pro Tyr Thr
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Gln Lys Tyr Asn Ser Ala Pro Tyr Tyr
1 5

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Gln Lys Tyr Asn Ser Ala Pro Tyr Asn
1 5

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Gln Lys Tyr Thr Ser Ala Pro Tyr Thr
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Gln Lys Tyr Asn Arg Ala Pro Tyr Asn
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Gln Lys Tyr Asn Ser Ala Ala Tyr Ser
1 5

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Gln Gln Tyr Asn Ser Ala Pro Asp Thr
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Gln Lys Tyr Asn Ser Asp Pro Tyr Thr
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Gln Lys Tyr Ile Ser Ala Pro Tyr Thr
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Gln Lys Tyr Asn Arg Pro Pro Tyr Thr
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Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn
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<400> 30
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Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu His Tyr
1 5 10

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Ala Ser Phe Leu Ser Thr Ser Ser Ser Leu Glu Tyr
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<400> 34
Ala Ser Tyr Leu Ser Thr Ala Ser Ser Leu Glu Tyr
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Val Ser Tyr Leu Ser Thr Ala Ser Ser Leu Asp Asn
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gggaaagccc ctaagctcct gatctatgct gcatccactt tgcaatcagg ggtcccatct 180
cggttcagtg gcagtggatc tgggacagat ttcactctca ccacagcag cctacagcct 240
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gggaccaagg tggaaatcaa a 321

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ccaggaagg gcctggaatg ggtctcagct atcacttgga atagtgggtca catagactat 180
gcggaactctg tggagggccg attcaccatc tccagagaca acgccaagaa ctccctgtat 240
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